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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/830,028
Filing Date: August 15, 2001
Appellant(s): VERKAMA, MARKKU

Larry J. Hume
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 04-17-2009 appealing from the Office action mailed 05-29-2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

6,172,974 B1	Tseng et al	01-2001
6,108,560	Navaro et al	08-2001
6,295,302 B1	Hellwig et al	09-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-12, 14-17 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tseng et al (6172974) in views of Navaro et al (6108560).

Regarding claims 1-3 Tseng et al teaches a digital telecommunication system comprising (fig. 2, 4):

a first center (MSC 12 A) configured to enable speech communication between a plurality of terminals (MS A, MS B, mobile stations 20), the first center being associated with a calling terminal (MS A) and including a first transcoder unit (col. 4, 35-56);

a second center (12 B) configured to enable speech communication between a plurality of terminals (MS A, MS B), the second centre being associated with a called terminal (MS B) and including a second transcoder unit (col. 4, 35-56),

wherein at least one of the first (MSC 12 A) and second centres (12 B) comprises a mobile switching centre (fig. 2),

wherein the first and second transcoder units (originating MSC and terminating MSC) and each of the terminals (MS A, MS B) include speech codecs (MS A include speech codec 24, MS B include speech codec 24), in which each of the speech codecs comprises an encoder unit and decoder unit (col. 4, 35-56, col. 7, lines 1-40),

wherein the terminals are arranged to provide information regarding the supported speech codecs to their associated switching centers (each mobile station 20, the codes 24 is provided in MSCs/BSCs, col. 4, lines 33-37, base on terminating MSC/BSC generates tones that indicates the type of transcoding and cross transcoding are predefined during the network setup) (col. 5, 33-65, col. 9, lines 40-65);

the first centre is configured to perform handshaking (bypass) with the second center, the handshaking including indication of the speech codecs supported by the calling terminal (col. 9, lines 40-65);

wherein at least one of the first and second centres is configured to establish call connections that bypass one or more of the transcoder units or to control the transcoder units to transmit encoded speech between the called and calling terminals without performing speech encoding operations so that speech is encoded and decoded only in the terminals (col. 7, lines 1-40, col. 9, lines 40-65). Tseng et al further teaches the originating and terminating units of voice communication system contains a vocoder, base station for wireless communication and a BSC/MSC having a vocoder. The base stations are interconnected through voice channels. The originating and terminating units contain A/D-D/A converters and apparatus for achieving tandem free operation (TFO) in which the vocoders in MSC/BSC are bypassed. Signaling device of terminating unit responds to call initiation signal of originating unit through BSC/MSC and sends a low frequency signal through channel to the base station of originating unit. The frequency of signal indicates the type and capabilities of terminating unit vocoder which is less than the roll-off frequency of A/D-D/A converters. An analyzer of originating unit base station analyses the received low frequency signal and determines the compatible condition of digital signals between vocoders. The control units provided in base stations directs voice signals between units and bypasses both BSC/MSC vocoders, when the digital signals of terminating unit vocoder is compatible with originating unit vocoder and directs digital voice signal in tandem mode when the digital signal of terminating unit vocoder is not compatible with originating unit. The compatible condition of digital signals of terminating unit vocoder with originating unit vocoder is determined, by analysis of low frequency signal. Tseng et al does not specifically state

in detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals.

In an analogous art, Navaro et al teaches more detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals (As appropriate codec is selected, based on signaling information with reference to data provided in the form of look-up table) (col. 2, line 56-col. 3, line 10, col. 3, line 62-col. 4, line 6, col. 5, lines 53-60, col. 8, line 5-col. 9, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al by specifically adding features centre is configured to choose the speech codec used commonly by the calling and called terminals in order to enhance system performance improves voice quality, when the codecs supported are of common type, tandem free operation is established and hence quality of GSM link is maximized. As appropriate codec is selected, based on signaling information with reference to data provided in the form of look-up table, the quality of the link is maximized. Provides communication link wherein the signal quality is maintained at or around the best signal quality for the given codecs available as taught by Navaro et al.

Regarding claim 14 Tseng et al teaches a mobile switching centre in a digital telecommunication network configured to receive information regarding supported speech codecs of a calling terminal and each of the terminals (MS A, MS B) include speech codecs, in which each of the speech codecs comprises an encoder unit and

decoder unit, and connect a transcoder located in a transcoder unit to a call connection when required, wherein (col. 4, 35-56, col. 7, lines 1-40, see claim 1):

the mobile switching centre is configured to perform handshaking with another centre associated with a called terminal (col. 5, 33-65,col. 9, lines 40-65), the handshaking including indication of speech codecs supported by the calling terminal associated with the centre (col. 5, 33-65,col. 9, lines 40-65, see claim 1), and

the mobile switching centre is configured to connect a call connection that bypasses the transcoder unit or to control the transcoder unit to transmit the encoded speech without performing speech encoding operations in such a way that speech encoding and decoding are only performed in the calling or called terminal (col. 7, lines 1-40, col. 9, lines 40-65). Tseng et al does not specifically state in detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals.

In an analogous art, Navaro et al teaches more detail wherein at least one of the first and second centres is configured to choose the speech codec used commonly by the calling and called terminals (col. 2, line 56-col. 3, line 10, col. 3, line 62-col. 4, line 6, col. 8, line 5-col. 9, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al by specifically adding features centre is configured to choose the speech codec used commonly by the calling and called terminals in order to enhance system performance improves voice quality, when the codecs supported are of common type, tandem free operation is established and hence quality of GSM link is maximized. As appropriate

codec is selected, based on signaling information with reference to data provided in the form of look-up table, the quality of the link is maximized. Provides communication link wherein the signal quality is maintained at or around the best signal quality for the given codecs available as taught by Navaro et al.

Regarding claim 4 Tseng et al teaches wherein the handshaking is performed as outband signaling (col. 9, lines 40-65).

Regarding claim 5 Tseng et al teaches wherein the first and second centres are configured to perform the handshaking in association with a routing information inquiry issued in response to a determination that the called terminal is a mobile subscriber (col. 9, lines 40-65, see claim 1).

Regarding claims 6,7 Tseng et al teaches the first center is configured to send the routing information inquiry including information associated with the speed coded sported by the calling terminal (col. 7, lines 1-40,. 9, lines 40-65, see claim 1).

Regarding claims 8,9 Tseng et al teaches wherein the first and second centres are configured to perform the handshaking in association with inter-MSC signaling (col. 6, lines 30-63, col. 7, lines 1-40,. 9, lines 30-65, figs. 2 and 4).

Regarding claims 10,11 Tseng et al teaches wherein, when required, at least one of the first and second centre is configured to notify the associated of the speech codec it has to use as the result of the handshaking (col. 7, lines 1-40,. 9, lines 40-65, see claim 1).

Regarding claim 12 Tseng et al teaches wherein a pulse code modulated digital link exists between the first and second centres, and the first and second centres are configured to control their respective transcoder units to adapt an encoded speech signal to one or more least significant bits of PCM samples without transcoding (col. 4, 35-56).

Tseng et al teach regarding claims 15-17 signaling is ISUP setup is an IAM and ANM message (see fig. 2).

3. Claims 13 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Tseng et al (6172974) in views of Navaro et al (6108560) and Hellwig et al (6295302).

Tseng et al and Navaro et al do not specifically state the system configured to support packet link.

In an analogous art, Hellwig et al teaches the system configured to support packet link (col. 8, lines 16-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Tseng et al and Navaro et al by specifically adding features packet link in order to enhance

system performance improves voice quality, when the codecs supported are of common type, tandem free operation is established and hence quality of internet link is maximized as taught by Hellwig et al.

(10) Response to Argument

A. The Examiner has not made the required prima facie case for unpatentability of claims 1-12 and 14-17 under 35 U.S.C. §103(a) over Tseng et al. (6,172,974) in view of Navaro et al. (6,108,560).

1. On pages 6-7 of the Appeal Brief, the Appellant contends Specific Deficiencies of Tseng & Navaro with Respect to the Claim. Examiner respectfully disagrees with this argument for the following reasons:

Tseng et al teaches the structure of the first center (MSC 12A, fig. 2) being associated with a calling terminal (MS A, fig. 2) including a first transcoder (24, fig. 2). Tseng et al also teaches a second center (MSC 12 B, fig. 2) being associated with a called terminal (MS B, fig. 2) including a second transcoder (24, fig. 2), wherein the first and second transcoder and each of the terminals (MS A, MS B, fig. 2) include speech codecs and the terminal are arranged to provide information to their associated switching center.

In col. 4, lines 40-43, Tseng suggest that codecs/vocoder (24, fig. 2) in mobile station [i.e., terminal] compresses digitized voice for transmission to respective BSC/MSC in a format such as Enhanced Full Rate codec (EFRC). In other word, the

mobile station is providing digitized information in "EFRC format" compressed by the codecs/vocoder to its associated switching center. It clearly means that the mobile station indicates its speech codecs to a switching center. Tseng fails to specifically teach handshaking process such that to provide an indication of the speech codecs supported by the calling terminal, and the at least one of the first and second centers is configured to choose the speech codec used commonly by the calling and called terminals so that at least one of the first and second centers is configured to establish the call by bypassing one or more transcoder units without performing speech encoding operations. However, Navaro teaches signaling information [i.e., indication] used by each party mobile station MS A or MS B in fig.8 [i.e., calling and called terminals] of the codecs supported between each radio station and selecting appropriate codes upon signaling information in order to establish tandem free operation [i.e., establish the call] such that each mobile switching center being signaling by each party of the codecs supported between each radio station and selecting an appropriate codec based upon signaling information in order to establish tandem free operation (abstract and col. 2 line 47 through col. 3 line 35). Thus, Tseng et al and Navaro et al, in combination teach the claimed limitations as recited in claims 1 and 14.

2. On pages 7-9 of the Appeal Brief, the Appellant further argued that Tseng is completely silent with respect to providing any teaching or suggestion of any activity in which a terminal would indicate its speech codecs to a switching center, or in which

a terminal would even have occasion to indicate its speech codecs to a switching center. Examiner respectfully disagrees with this argument for the following reasons. In col. 4, lines 40-43, Tseng teaches that codecs/vocoder (24, fig. 2) in mobile station [i.e., terminal] compresses digitized voice for transmission to respective BSC/MSC in a format such as Enhanced Full Rate codec (EFRC). In other word, the mobile station is providing digitized information in "EFRC format" compressed by the codecs/vocoder to its associated switching center. Thus, it clearly means that the mobile station indicates its speech codecs to a switching center. In addition, Appellant further argued that Navaro does not disclose, teach or suggest any centers which would choose the speech codec used commonly by the calling and called terminals. Furthermore, Navaro does not teach, suggest, or even provide so much as a hint that the terminals would indicate their supported speech codecs to their associated switching centers, ie., MSC's. Examiner respectfully disagreed because in col. 8, lines 5-10 and 65-66, Navaro teaches that BSC chooses a codec and, in col. 3, line 65-col. 4, line 1, col. 20, lines 40-42, fig. 8, Navaro teaches both of two radio stations MS A and MS B in Fig.8 [i.e., calling terminal and called terminal] communicate with a respective base station controller [i.e., switching center] by using a selected codecs. In other word, Navaro teaches that both of the radio stations [i.e., terminals] are using their supported speech codecs to communicate with a respective base station controller [i.e., switching center]. It clearly means that Navaro teaches that the radio stations [i.e., terminals] would indicate their supported speech codecs to their associated switching centers.

Accordingly, since the applied art does teach or suggest all the claimed limitations, affirmation of the rejection of independent claims 1 and 14 is respectfully requested. In addition, dependent claims 2-13 and 15-17 variously and ultimately depend rejected independent claims 1 and 17, respectively, and are submitted as being rejected at least on that basis.

3. On page 9 of the Appeal Brief, the Appellant further contends that the Office Action does not provide any reason why it would be obvious to one of ordinary skill in the art to combine the two references and Tseng "Teaches Away" from the Claimed Invention. Examiner respectfully disagrees with this argument for the following reasons. It appears that Tseng provides the suggestion that codecs/vocoder (24, fig. 2) in mobile station [i.e., terminal] compresses digitized voice for transmission to respective BSC/MSC in a format such as Enhanced Full Rate codec (EFRC) (see col. 4, lines 40-43). In other word, the mobile station is providing digitized information in “EFRC format” compressed by the codecs/vocoder to its associated switching center. It clearly means that the mobile station indicates its speech codecs to a switching center. Whereas Navaro teaches signaling information [i.e., indication] used by each party mobile station MS A or MS B in fig.8 [i.e., calling and called terminals] of the codecs supported between each radio station and selecting appropriate codes upon signaling information in order to establish tandem free operation [i.e., establish the call] (abstract, col. 2, line 47-col. 3 line 35). Furthermore, Navaro provides suggestion that the present invention may be put into practice with variations of the specific to those one of

ordinary skill in the art as broadly disclosed herein in col. 4, lines 41-43. Thus, both of the references provide the suggestion in combination with each other to teach the claimed limitations.

B. The Examiner has not made the required prima facie case for unpatentability of claim 13 under 35 U.S.C. §103(a) over Tseng et al. (6,172,974) in view of Navaro et al. (6,108,560) and Hellwig et al. (6,295,302).

1. On page 10 of the Appeal Brief, the Appellant contends that Dependent Claim 13 is Patentable over Tseng/Navaro & Hellwig. Examiner respectfully disagreed because independent claim 1 is still being rejected by the combination of Tseng and Navaro as stated above. Thus, affirmation of rejection of the dependent claim 13 under the combination of Tseng, Navaro and Hellwig is respectfully requested.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Khawar Iqbal/
Examiner
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Conferees:

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